


**TRANSMITTAL  
FORM**

(To be used for all correspondence after initial filing)

Total Number of Pages in This Submission

Application Number	10/637,847
Filing Date	August 7, 2003
First Named Inventor	Carl L. Hansen
Art Unit	1732
Examiner Name	Edmund H. Lee
Attorney Docket Number	20174C-004940US

**ENCLOSURES (Check all that apply)**

<input type="checkbox"/> Fee Transmittal Form	<input type="checkbox"/> Drawing(s)	<input type="checkbox"/> After Allowance Communication to TC		
<input type="checkbox"/> Fee Attached	<input type="checkbox"/> Licensing-related Papers	<input type="checkbox"/> Appeal Communication to Board of Appeals and Interferences		
<input type="checkbox"/> Amendment/Reply	<input type="checkbox"/> Petition	<input type="checkbox"/> Appeal Communication to TC (Appeal Notice, Brief, Reply Brief)		
<input type="checkbox"/> After Final	<input type="checkbox"/> Petition to Convert to a Provisional Application	<input type="checkbox"/> Proprietary Information		
<input type="checkbox"/> Affidavits/declaration(s)	<input type="checkbox"/> Power of Attorney, Revocation	<input type="checkbox"/> Status Letter		
<input type="checkbox"/> Extension of Time Request	<input type="checkbox"/> Change of Correspondence Address	<input checked="" type="checkbox"/> Other Enclosure(s) (please identify below):		
<input type="checkbox"/> Express Abandonment Request	<input type="checkbox"/> Terminal Disclaimer			
<input checked="" type="checkbox"/> Information Disclosure Statement	<input type="checkbox"/> Request for Refund			
<input type="checkbox"/> Certified Copy of Priority Document(s)	<input type="checkbox"/> CD, Number of CD(s) _____	<input type="checkbox"/> SB/08		
<input type="checkbox"/> Reply to Missing Parts/ Incomplete Application	<input type="checkbox"/> Landscape Table on CD	156 references		
<input type="checkbox"/> Reply to Missing Parts under 37 CFR 1.52 or 1.53		Return Postcard		
<table border="1"> <tr> <td>Remarks</td> <td>The Commissioner is authorized to charge any additional fees to Deposit Account 20-1430.</td> </tr> </table>			Remarks	The Commissioner is authorized to charge any additional fees to Deposit Account 20-1430.
Remarks	The Commissioner is authorized to charge any additional fees to Deposit Account 20-1430.			

**SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT**

Firm Name	Townsend and Townsend and Crew LLP		
Signature	<i>Patrick M. Boucher</i>		
Printed name	Patrick M. Boucher		
Date	October 12, 2005	Reg. No.	44,037

**CERTIFICATE OF TRANSMISSION/MAILING**

I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Mail Stop Amendment, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on the date shown below.

Signature	<i>Janet L. Newmaker</i>	
Typed or printed name	Janet L. Newmaker	Date
	October 12, 2005	

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to:

Mail Stop Amendment  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

On October 12, 2005

**PATENT**  
Attorney Docket No.: 20174C-004940US  
Client Reference Nos.: CIT 3484-CIP-CIP-CIP  
and U186.210.US

TOWNSEND and TOWNSEND and CREW LLP

By: Janet L. Newmaker  
Janet L. Newmaker



**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re application of:

Carl L. Hansen et al.

Application No.: 10/637,847

Filed: August 7, 2003

For: Microfluidic Protein  
Crystallography

Customer No.: 20350

Confirmation No.: 3349

Examiner: Edmund H. Lee

Art Unit: 1732

**SUPPLEMENTAL INFORMATION  
DISCLOSURE STATEMENT UNDER  
37 CFR §§ 1.97 AND 1.98**

Mail Stop Amendment  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

The references cited on attached form PTO/SB/08A and PTO/SB/08B are being called to the attention of the Examiner. Copies of the non-US references (in compliance with the requirements of 1287 OG 163) are enclosed.

It is respectfully requested that the cited references be expressly considered during the prosecution of this application, and the references be made of record therein and appear among the "references cited" on any patent to issue therefrom.

**BEST AVAILABLE COPY**

As provided for by 37 CFR 1.97(g) and (h), no inference should be made that the information and references cited are prior art merely because they are in this statement and no representation is being made that a search has been conducted or that this statement encompasses all the possible relevant information.

Applicants believe that no fee is required for submission of this statement. If a fee is required, however, the Commissioner is authorized to deduct such fee from the undersigned's Deposit Account No. 20-1430. Please deduct any additional fees from, or credit any overpayment to, the above-noted Deposit Account.

Respectfully submitted,

  
Patrick M. Boucher  
Reg. No. 44,037

Date: October 12, 2005

TOWNSEND and TOWNSEND and CREW LLP  
Two Embarcadero Center, Eighth Floor  
San Francisco, CA 94111-3834  
Tel: 303-571-4000  
Fax: 415-576-0300  
PMB/jln  
60605997 v1



Substitute for form 1449A/PTO				<b>Complete if Known</b>	
				Application Number	10/637,847
				Filing Date	August 7, 2003
				First Named Inventor	Carl L. Hansen
				Art Unit	1732
				Examiner Name	Edmund H. Lee
Sheet	1	of	13	Attorney Docket Number	20174C-004940US

<b>U.S. PATENT DOCUMENTS</b>					
Examiner Initials*	Cite No. <sup>1</sup>	Document Number Number Kind Code <sup>2</sup> (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
	A1	US-3,570,515	03-16-1971	Kinner	
	A2	US-3,747,628	07-24-1973	Holster et al.	
	A3	US-4,046,159	09-06-1977	Pegourie	
	A4	US-4,119,368	10-10-1978	Yamakazi	
	A5	US-4,153,855	05-08-1979	Feingold	
	A6	US-4,245,673	01-20-1981	Bouteille et al.	
	A7	US-4,434,704	03-06-1984	Surjaatmadja	
	A8	US-4,898,582	02-06-1990	Faste	
	A9	US-4,992,312	02-12-1991	Frisch	
	A10	US-5,085,562	02-04-1992	Van Lintel	
	A11	US-5,088,515	02-18-1992	Kamen	
	A12	US-5,096,388	03-17-1992	Weinberg	
	A13	US-5,126,115	06-30-1992	Fujita et al.	
	A14	US-5,164,558	11-17-1992	Huff et al.	
	A15	US-5,171,132	12-15-1992	Miyazaki	
	A16	US-5,224,843	07-06-1993	Van Lintel	
	A17	US-5,259,737	11-09-1993	Kamisuki et al.	
	A18	US-5,265,327	11-30-1993	Faris et al.	
	A19	US-5,290,240	03-01-1994	Horres, Jr.	
	A20	US-5,336,062	08-09-1994	Richter	
	A21	US-5,346,372	09-13-1994	Naruse et al.	
	A22	US-5,375,979	12-27-1994	Trah	
	A23	US-5,376,252	12-27-1994	Ekstrom	
	A24	US-5,400,741	03-28-1995	DeTitta et al.	
	A25	US-5,423,287	06-13-1995	Usami et al.	
	A26	US-5,529,465	06-25-1996	Zengerle et al.	
	A27	US-5,593,130	01-14-1997	Hansson et al.	
	A28	US-5,642,015	06-24-1997	Whitehead et al.	

Examiner Signature		Date Considered
--------------------	--	-----------------

<sup>1</sup>EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. <sup>2</sup>Applicant's unique citation designation number (optional). <sup>3</sup>Kind Codes of U.S. Patent Documents at [www.uspto.gov](http://www.uspto.gov) or MPEP 901.04. <sup>4</sup>Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). <sup>5</sup>For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>6</sup>Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. <sup>7</sup>Applicant is to place a check mark here if English language Translation is attached.

Substitute for form 1449A/PTO				<b>Complete if Known</b>	
				Application Number	10/637,847
				Filing Date	August 7, 2003
				First Named Inventor	Carl L. Hansen
				Art Unit	1732
				Examiner Name	Edmund H. Lee
Sheet	2	of	13	Attorney Docket Number	20174C-004940US

<b>U.S. PATENT DOCUMENTS</b>					
Examiner Initials*	Cite No. <sup>1</sup>	Document Number Number Kind Code <sup>2</sup> (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
	A29	US-5,659,171	08-19-1997	Young et al.	
	A30	US-5,660,370	08-26-1997	Webster	
	A31	US-5,681,024	10-28-1997	Lisec et al.	
	A32	US-5,705,018	01-06-1998	Hartley	
	A33	US-5,759,014	06-02-1998	Van Lintel	
	A34	US-5,775,371	07-07-1998	Pan et al.	
	A35	US-5,788,468	08-04-1998	Dewa et al.	
	A36	US-5,836,750	11-17-1998	Cabuz	
	A37	US-5,842,787	12-01-1998	Kopf-Sill et al.	
	A38	US-5,875,817	03-02-1999	Carter	
	A39	US-5,876,187	03-02-1999	Afromowitz	
	A40	US-5,932,799	08-03-1999	Moles	
	A41	US-5,942,443	08-24-1999	Parce et al.	
	A42	US-6,007,309	12-28-1999	Hartley	
	A43	US-6,043,080	03-28-2000	Lipshutz et al.	
	A44	US-6,123,769	09-26-2000	Sanjoh	
	A45	US-6,155,282	12-05-2000	Zachary et al.	
	A46	US-6,165,694	12-26-2000	Liu	
	A47	US-6,174,365 B1	01-16-2001	Sanjoh	
	A48	US-6,296,673 B1	10-02-2001	Santarsiero et al.	
	A49	US-2001/0027745 A1	10-11-2001	Weigl et al.	
	A50	US-2001/0041357 A1	11-15-2001	Fouillet et al.	
	A51	US-6,345,502 B1	02-12-2002	Tai et al.	
	A52	US-6,409,832 B2	06-25-2002	Weigl et al.	
	A53	US-6,767,706 B2	07-27-2004	Quake et al.	

Examiner Signature		Date Considered	
--------------------	--	-----------------	--

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. <sup>1</sup> Applicant's unique citation designation number (optional). <sup>2</sup> Kind Codes of U.S. Patent Documents at [www.uspto.gov](http://www.uspto.gov) or MPEP 901.04. <sup>3</sup> Enter Office that issued the document, by the two-letter code (WIPO Standard ST-3). <sup>4</sup> For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>5</sup> Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST-16 if possible. <sup>6</sup> Applicant is to place a check mark here if English language Translation is attached.

Substitute for form 1449A/PTO				<i>Complete if Known</i>	
				Application Number	10/637,847
				Filing Date	August 7, 2003
				First Named Inventor	Carl L. Hansen
				Art Unit	1732
				Examiner Name	Edmund H. Lee
Sheet	3	of	13	Attorney Docket Number	20174C-004940US

FOREIGN PATENT DOCUMENTS						
Examiner Initials*	Cite No. <sup>1</sup>	Foreign Patent Document			Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Country Code <sup>3</sup>	Number <sup>4</sup>	Kind Code <sup>5</sup> (if known)		
	B1	EP	0 592 094	A2	04-13-1994 International Business Machines Corporation	<input type="checkbox"/>
	B2	EP	0 703 364	A1	03-27-1996 Fraunhofer-Gesellschaft Zur Förderung Der Angewandten Forschung E.V.	<input type="checkbox"/>
	B3	EP	0 706 004	A2	04-10-1996 Bayer Corporation	<input type="checkbox"/>
	B4	EP	0 779 436	A2	06-18-1997 Frank T. Hartley	<input type="checkbox"/>
	B5	EP	0 829 360	A2	03-18-1998 Xerox Corporation	<input type="checkbox"/>
	B6	EP	0 845 603	A1	06-03-1998 Xerox Corporation	<input type="checkbox"/>
	B7	EP	0 999 055	A2	05-10-2000 Samsung Electronics Co., Ltd.	<input type="checkbox"/>
	B8	GB	2 155 152	A	09-18-1985 Allied Corporation	<input type="checkbox"/>
	B9	GB	2 308 460	A	06-25-1997 Daewoo Electronics Co., Ltd.	<input type="checkbox"/>
	B10	WO	98/07069	A1	02-19-1998 The Regents Of The University Of Michigan	<input type="checkbox"/>
	B11	WO	99/17093	A1	04-08-1999 The Regents Of The University Of Michigan	<input type="checkbox"/>

Examiner Signature	Date Considered
--------------------	-----------------

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. <sup>1</sup>Applicant's unique citation designation number (optional). <sup>2</sup>Kind Codes of U.S. Patent Documents at [www.uspto.gov](http://www.uspto.gov) or MPEP 901.04. <sup>3</sup>Enter Office that issued the document, by the two-letter code (WIPO Standard ST-3). <sup>4</sup>For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>5</sup>Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST-16 if possible. <sup>6</sup>Applicant is to place a check mark here if English language Translation is attached.

Substitute for form 1449B/PTO				<b>Complete if Known</b>	
<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>					
(use as many sheets as necessary)					
Sheet	4	of	13		
				Application Number	10/637,847
				Filing Date	August 7, 2003
				First Named Inventor	Carl L. Hansen
				Art Unit	1732
				Examiner Name	Edmund H. Lee
				Attorney Docket Number	20174C-004940US

<b>NON PATENT LITERATURE DOCUMENTS</b>				
Examiner Initials *	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.		T <sup>2</sup>
	C1	"Biochips," Nature Biotechnology, Vol. 18, Supplement 2000, pp. IT43-IT44, 2000		
	C2	"Chapter 9: Microfluidic Devices," Micromachined Transducers Sourcebook, pp. 779-882, 1998		
	C3	"Electro Microfluidic Dual In-Line Package (EMDIP)," Sandia National Laboratories, 2 pages, no date		
	C4	"Last Chance For Micromachines," The Economist Technology Quarterly, printed from website <a href="http://www.economist.com/science/displayStory.cfm?Story_ID=442930">http://www.economist.com/science/displayStory.cfm?Story_ID=442930</a> on 1/25/2001, 8 pages, 12/7/2000		
	C5	ABOLA, ENRIQUE et al., "Automation Of X-Ray Crystallography," Nature Structural Biology, Structural Genomics Supplement, pp. 973-977, 11/2000		
	C6	AHN, CHONG H. et al., "Fluid Micropumps Based On Rotary Magnetic Actuators," Proceedings of 1995 IEEE Micro Electro Mechanical Systems Workshop (MEMS '95), Amsterdam, Netherlands, pp. 408-412, 1/29-2/2/1995		
	C7	ANDERSEN, GREGERS ROM et al., "A Spreadsheet Approach To Automated Protein Crystallization," Journal of Applied Crystallography, Vol. 29, pp. 236-240, 1996		
	C8	ANDERSON, ROLFE C. et al., "Microfluidic Biochemical Analysis System," Transducers '97, 1997 International Conference on Solid-State Sensors and Actuators, Chicago, Illinois, pp. 477-480, 6/16-19/1997		
	C9	ANGELL, JAMES B. et al., "Silicon Micromechanical Devices," Scientific American, pp. cover, 44-55, 4/1983		
	C10	ARMANI, DENIZ et al., "Re-Configurable Fluid Circuits By PDMS Elastomer Micromachining," IEEE Int. Conf. Micro Electro Mech. Syst. Tech. Digest, Vol. 12, pp. 222-227, 1999		
	C11	BALLANTYNE, J. P. et al., "Selective Area Metallization By Electron-Beam Controlled Direct Metallic Deposition," J. Vac. Sci. Technol., Vol. 10, No. 6, pp. 1094-1097, 11/1973		
	C12	BELGRADER, PHILLIP et al., "Rapid Pathogen Detection Using A Microchip PCR Array Instrument," Clinical Chemistry, Vol. 44, No. 10, pp. 2191-2194, 1998		
	C13	BENARD, W. L. et al., "A Titanium-Nickel Shape-Memory Alloy Actuated Micropump," Transducers '97, 1997 International Conference on Solid-State Sensors and Actuators, Chicago, Illinois, pp. 361-364, 6/16-19/1997		
	C14	BERRY, MICHAEL B., "Protein Crystallization: Theory And Practice," Excerpts from Doctoral Thesis, 36 pages, 9/17/1995		
	C15	BLOOMSTEIN, T. M. et al., "Laser-Chemical Three-Dimensional Writing For Microelectromechanics And Application To Standard-Cell Microfluidics," J. Vac. Sci. Technol. B, Vol. 10, No. 6, pp. 2671-2674, 11/1992		

Examiner Signature		Date Considered
--------------------	--	-----------------

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>1</sup> Applicant's unique citation designation number (optional). <sup>2</sup> Applicant is to place a check mark here if English language Translation is attached.

Substitute for form 1449B/PTO				<b>Complete if Known</b>	
<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>				Application Number	10/637,847
(use as many sheets as necessary)				Filing Date	August 7, 2003
				First Named Inventor	Carl L. Hansen
				Art Unit	1732
				Examiner Name	Edmund H. Lee
Sheet	5	of	13	Attorney Docket Number	20174C-004940US

<b>NON PATENT LITERATURE DOCUMENTS</b>				
Examiner Initials *	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.		T <sup>2</sup>
	C16	BOUSSE, LUC et al., "Electrokinetically Controlled Microfluidic Analysis Systems," <i>Annu. Rev. Biophys. Biomol. Struct.</i> , Vol. 29, pp. 155-181, 2000		
	C17	BRECHTEL, R. et al., "Control Of The Electroosmotic Flow By Metal-Salt-Containing Buffers," <i>Journal of Chromatography A</i> , Vol. 716, pp. 97-105, 1995		
	C18	BRUSH, MICHAEL, "Automated Laboratories," <i>The Scientist</i> , Vol. 13, No. 4, 10 pages, 2/15/1999		
	C19	BRYZEK, JANUSZ et al., "Micromachines On The March", <i>IEEE Spectrum</i> , Vol. 31, No. 5, pp. 20-31, 5/1994		
	C20	BUCHAILLOT, LIONEL et al., "Silicon Nitride Thin Films Young's Modulus Determination By An Optical Non Destructive Method," <i>Jpn. J. Appl. Phys.</i> , Vol. 36, Part 2, No. 6B, pp. L794-L797, 6/15/1997		
	C21	BURBAUM, JONATHAN J. et al., "New Technologies For High-Throughput Screening," <i>Current Opinion in Chemical Biology</i> , Vol. 1, pp. 72-78, 1997		
	C22	CALKINS, KATHRYN, "Mycometrix: Rubber Chips," <i>BioCentury</i> , 2 pages, 10/16/2000		
	C23	CHAYEN, NAOMI E., "A Novel Technique To Control The Rate Of Vapour Diffusion, Giving Larger Protein Crystals," <i>Journal of Applied Crystallography</i> , Vol. 30, pp. 198-202, 1997		
	C24	CHAYEN, NAOMI E. et al., "An Automated System For Micro-Batch Protein Crystallization And Screening," <i>J. Appl. Cryst.</i> , Vol. 23, pp. 297-302, 1990		
	C25	CHAYEN, NAOMI E., "Comparative Studies Of Protein Crystallization By Vapour-Diffusion And Microbatch Techniques," <i>Acta Cryst.</i> , Vol. D54, pp. 8-15, 1998		
	C26	CHAYEN, NAOMI E. et al., "Microbatch Crystallization Under Oil - A New Technique Allowing Many Small-Volume Crystallization Trials," <i>Journal of Crystal Growth</i> , Vol. 122, pp. 176-180, 1992		
	C27	CHAYEN, NAOMI E. et al., "New Developments Of The IMPAX Small-Volume Automated Crystallization System," <i>Acta Cryst.</i> , Vol. D50, pp. 456-458, 1994		
	C28	CHIU, DANIEL T. et al., "Patterned Deposition Of Cells And Proteins Onto Surfaces By Using Three-Dimensional Microfluidic Systems," <i>PNAS</i> , Vol. 97, No. 6, pp. 2408-2413, 3/14/2000		
	C29	CHOU, HOU-PU et al., "A Microfabricated Device For Sizing And Sorting DNA Molecules," <i>Proc. Natl. Acad. Sci.</i> , Vol. 96, pp. 11-13, 1/1999		
	C30	CHOU, HOU-PU et al., "A Microfabricated Rotary Pump," <i>Biomedical Microdevices</i> , Vol. 3, No. 4, pp. 323-330, 2001		
	C31	CHOU, HOU-PU et al., "Integrated Elastomer Fluidic Lab-On-A-Chip-Surface Patterning And DNA Diagnostics," <i>Proceedings of the Solid State Actuator and Sensor Workshop</i> , Hilton Head, South Carolina, 4 pages, 2000		

Examiner Signature		Date Considered
--------------------	--	-----------------

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>1</sup> Applicant's unique citation designation number (optional). <sup>2</sup> Applicant is to place a check mark here if English language Translation is attached.

Substitute for form 1449B/PTO				<b>Complete if Known</b>	
<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>				Application Number	10/637,847
(use as many sheets as necessary)				Filing Date	August 7, 2003
				First Named Inventor	Carl L. Hansen
				Art Unit	1732
				Examiner Name	Edmund H. Lee
Sheet	6	of	13	Attorney Docket Number	20174C-004940US

<b>NON PATENT LITERATURE DOCUMENTS</b>				
Examiner Initials *	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.		T <sup>2</sup>
	C32	CHOU, HOU-PU et al., "Multiple Disease Diagnostics On A Single Chip," Biophysics Lab, Caltech, pp. 1-4, 3/1/2000		
	C33	COX, M. JANE et al., "Experiments With Automated Protein Crystallization," J. Appl. Cryst., Vol. 20, pp. 366-373, 1987		
	C34	DELAMARCHE, EMMANUEL et al., "Patterned Delivery Of Immunoglobulins To Surfaces Using Microfluidic Networks," Science, Vol. 276, pp. 779-781, 5/2/1997		
	C35	DUFFY, DAVID C. et al., "Patterning Electroluminescent Materials With Feature Sizes As Small As 5 $\mu$ m Using Elastomeric Membranes As Masks For Dry Lift-Off," Advanced Materials, Vol. 11, No. 7, pp. 546-552, 1999		
	C36	DUFFY, DAVID C. et al., "Rapid Prototyping Of Microfluidic Switches In Poly(dimethyl siloxane) And Their Actuation By Electro-Osmotic Flow," J. Micromech. Microeng., Vol. 9, pp. 211-217, 1999		
	C37	EFFENHAUSER, CARLO S. et al., "Integrated Capillary Electrophoresis On Flexible Silicone Microdevices: Analysis Of DNA Restriction Fragments And Detection Of Single DNA Molecules On Microchips," Analytical Chemistry, Vol. 69, No. 17, pp. 3451-3457, 9/1/1997		
	C38	EFFENHAUSER, CARLO S. et al., "Integrated Chip-Based Capillary Electrophoresis," Electrophoresis, Vol. 18, pp. 2203-2213, 1997		
	C39	EISELÉ, JEAN-LUC, "Preparation Of Protein Crystallization Buffers With A Computer-Controlled Motorized Pipette - PIPEX," J. Appl. Cryst., Vol. 26, pp. 92-96, 1993		
	C40	FAHRENBERG, J. et al., "A Microvalve System Fabricated By Thermoplastic Molding," J. Micromech. Microeng., Vol. 5, pp. 169-171, 1995		
	C41	FENNA, R. E., "Crystallization Of Human $\alpha$ -Lactalbumin," J. Mol. Biol., Vol. 161, pp. 211-215, 1982		
	C42	FETTINGER, J. C. et al., "Stacked Modules For Micro Flow Systems In Chemical Analysis: Concept And Studies Using An Enlarged Model," Sensors and Actuators B, Vol. 17, pp. 19-25, 1993		
	C43	FOLCH, A. et al., "Molding Of Deep Polydimethylsiloxane Microstructures For Microfluidics And Biological Applications," Journal of Biomechanical Engineering, Vol. 121, pp. 28-34, 2/1999		
	C44	FOX, KRISTIN M. et al., "Crystallization Of Old Yellow Enzyme Illustrates An Effective Strategy For Increasing Protein Crystal Size," J. Mol. Biol., Vol. 234, pp. 502-507, 1993		
	C45	FU, ANNE Y. et al., "A Microfabricated Fluorescence-Activated Cell-Sorter," Nature Biotechnology, Vol. 17, pp. 1109-1111, 11/1999		
	C46	GALAMBOS, PAUL et al., "Electrical And Fluidic Packaging Of Surface Micromachined Electro-Microfluidic Devices," 8 pages, no date		

Examiner Signature		Date Considered
--------------------	--	-----------------

<sup>1</sup>EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>2</sup>Applicant's unique citation designation number (optional). <sup>2</sup>Applicant is to place a check mark here if English language Translation is attached.

Substitute for form 1449B/PTO				<b>Complete if Known</b>	
<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>					
(use as many sheets as necessary)					
Sheet	7	of	13		
Application Number	10/637,847				
Filing Date	August 7, 2003				
First Named Inventor	Carl L. Hansen				
Art Unit	1732				
Examiner Name	Edmund H. Lee				
Attorney Docket Number	20174C-004940US				

<b>NON PATENT LITERATURE DOCUMENTS</b>				
Examiner Initials *	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.		
	C47	GAASS, V. et al., "Integrated Flow-Regulated Silicon Micropump," Sensors and Actuators A, Vol. 43, pp. 335-338, 1994		T <sup>2</sup>
	C48	GERLACH, TORSTEN, "Pumping Gases By A Silicon Micro Pump With Dynamic Passive Valves," Transducers '97, 1997 International Conference on Solid-State Sensors and Actuators, Chicago, Illinois, pp. 357-360, 6/16-19/1997		
	C49	GOLL, C. et al., "Microvalves With Bistable Buckled Polymer Diaphragms," J. Micromech. Microeng., Vol. 6, pp. 77-79, 1996		
	C50	GRAVESEN, PETER et al., "Microfluids-A Review," J. Micromech. Microeng., Vol. 3, pp. 168-192, 1993		
	C51	GREENE, CHANA, "Characterizing The Properties Of PDMS," pp. 1-11, Summer 2000		
	C52	GUÉRIN, L. J. et al., "Simple And Low Cost Fabrication Of Embedded Micro-Channels By Using A New Thick-Film Photoplastic," Transducers '97, 1997 International Conference on Solid-State Sensors and Actuators, Chicago, Illinois, pp. 1419-1422, 6/18-19/1997		
	C53	HARRISON, D. JED et al., "Micromachining A Miniaturized Capillary Electrophoresis-Based Chemical Analysis System On A Chip," Science, Vol. 261, pp. 895-897, 8/13/1993		
	C54	HICKS, JENNIFER, "Genetics And Drug Discovery Dominate Microarray Research," R&D Magazine, pp. 28-33, 2/1999		
	C55	HORN, HOWARD, "Lab Chips Sector: Microtechnologies Are Changing Healthcare And More," Life Sciences, pp. 19-21, 3/20/2001		
	C56	HORNBECK, LARRY J. et al., "Bistable Deformable Mirror Device," Spatial Light Modulators and Applications 1988 Technical Digest Series, Summaries of papers presented at the Spatial Light Modulators and Applications Topical Meeting, Optical Society of America, Vol. 8, Postconference Edition, A215, pp. 107-110, 6/15-17/1988		
	C57	HOSOKAWA, KAZUO et al., "Handling Of Picoliter Liquid Samples In A Poly(dimethylsiloxane)-Based Microfluidic Device," Analytical Chemistry, Vol. 71, No. 20, pp. 4781-4785, 10/15/1999		
	C58	IKUTA, KOJI et al., "Three Dimensional Micro Integrated Fluid Systems (MIFS) Fabricated By Stereo Lithography," IEEE, pp. 1-6, 1994		
	C59	JACOBSON, STEPHEN C. et al., "High-Speed Separations On A Microchip," Analytical Chemistry, Vol. 66, No. 7, pp. 1114-1118, 4/1/1994		
	C60	JACOBSON, STEPHEN C. et al., "Microfluidic Devices For Electrokinetically Driven Parallel And Serial Mixing," Analytical Chemistry, Vol. 71, No. 20, pp. 4455-4459, 10/15/1999		
	C61	JERMAN, HAL, "Electrically-Activated, Normally-Closed Diaphragm Valves," Transducers '91, 1991 International Conference on Solid-State Sensors and Actuators, pp. cover, 1045-1048, 1991		

Examiner Signature	Date Considered
--------------------	-----------------

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>1</sup> Applicant's unique citation designation number (optional). <sup>2</sup> Applicant is to place a check mark here if English language Translation is attached.

Substitute for form 1449B/PTO				<b>Complete if Known</b>	
<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>				Application Number	10/637,847
(use as many sheets as necessary)				Filing Date	August 7, 2003
				First Named Inventor	Carl L. Hansen
				Art Unit	1732
				Examiner Name	Edmund H. Lee
Sheet	8	of	13	Attorney Docket Number	20174C-004940US

<b>NON PATENT LITERATURE DOCUMENTS</b>				
Examiner Initials *	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.		T <sup>2</sup>
	C62	JO, BYUNG-HO et al., "Fabrication Of Three-Dimensional Microfluidic Systems By Stacking Molded Polydimethylsiloxane (PDMS) Layers" SPIE, Vol. 3877, pp. 222-229, 9/1999		
	C63	JO, BYUNG-HO et al., "Three-Dimensional Micro-Channel Fabrication In Polydimethylsiloxane (PDMS) Elastomer," Journal of Microelectromechanical Systems, Vol. 9, No. 1, pp. 76-81, 3/2000		
	C64	JUNG, D. R. et al., "Chemical And Physical Interactions At Metal/Self-Assembled Organic Monolayer Interfaces," pp. 1-54, 1994		
	C65	KAGAN, C. R., "Organic-Inorganic Hybrid Materials As Semiconducting Channels In Thin-Film Field-Effect Transistors," Science, Vol. 286, pp. 945-947, 10/29/1999		
	C66	KAPUR, RAVI et al., "Fabrication And Selective Surface Modification Of 3-Dimensionally Textured Biomedical Polymers From Etched Silicon Substrates," Journal of Biomedical Materials Research, Vol. 33, pp. 205-216, 1996		
	C67	KENIS, PAUL J. A. et al., "Microfabrication Inside Capillaries Using Multiphase Laminar Flow Patterning," Science, Vol. 285, pp. 83-85, 7/2/1999		
	C68	KHOO, MELVIN et al., "A Novel Micromachined Magnetic Membrane Microfluid Pump," pp. 1-4, no date		
	C69	KIM, ENOCH et al., "Micromolding In Capillaries: Applications In Materials Science," J. Am. Chem. Soc., Vol. 118, No. 24, pp. 5722-5731, 1996		
	C70	KIM, ENOCH et al., "Polymer Microstructures Formed By Moulding In Capillaries," Nature, Vol. 376, pp. 581-584, 8/17/1995		
	C71	KIRK-OTHMER, "Concise Encyclopedia of Chemical Technology," John Wiley & Sons, 5 pages, no date		
	C72	KOPP, MARTIN U. et al., "Chemical Amplification: Continuous-Flow PCR On A Chip," Science, Vol. 280, pp. 1046-1048, 5/15/1998		
	C73	KUHN, LAWRENCE et al., "Silicon Charge Electrode Array For Ink Jet Printing," IEEE Transactions on Electron Devices, Vol. ED-25, No. 10, pp. 1257-1260, 10/1978		
	C74	KUMAR, AMIT et al., "Features Of Gold Having Micrometer To Centimeter Dimensions Can Be Formed Through A Combination Of Stamping With An Elastomeric Stamp And An Alkanethiol 'Ink' Followed By Chemical Etching," Appl. Phys. Lett., Vol. 63, No. 14, pp. 2002-2004, 10/4/1993		
	C75	KUMAR, AMIT et al., "Patterning Self-Assembled Monolayers: Applications In Materials Science," Langmuir, Vol. 10, pp. 1498-1511, 1994		
	C76	KWONG, PETER D. et al., "Probability Analysis Of Variational Crystallization And Its Application To gp120, The Exterior Envelope Glycoprotein Of Type 1 Human Immunodeficiency Virus (HIV-1)," Journal of Biological Chemistry, Vol. 274, No. 7, pp. 4115-4123, 2/12/1999		

Examiner Signature	Date Considered
--------------------	-----------------

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>1</sup> Applicant's unique citation designation number (optional). <sup>2</sup> Applicant is to place a check mark here if English language Translation is attached.

Substitute for form 1449B/PTO				<b>Complete if Known</b>	
<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>				Application Number	10/637,847
(use as many sheets as necessary)				Filing Date	August 7, 2003
				First Named Inventor	Carl L. Hansen
				Art Unit	1732
				Examiner Name	Edmund H. Lee
Sheet	9	of	13	Attorney Docket Number	20174C-004940US

<b>NON PATENT LITERATURE DOCUMENTS</b>					
Examiner Initials *	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.			T <sup>2</sup>
	C77	KWONG, PETER D. et al., "Structure Of An HIV gp 120 Envelope Glycoprotein In Complex With The CD4 Receptor And A Neutralizing Human Antibody," <i>Nature</i> , Vol. 393, pp. 648-659, 6/18/1998			
	C78	LAGALLY, ERIC T. et al., "Monolithic Integrated Microfluidic DNA Amplification And Capillary Electrophoresis Analysis System," <i>Sensors and Actuators B</i> , Vol. 63, pp. 138-146, 2000			
	C79	LAGALLY, E. T. et al., "Single-Molecule DNA Amplification And Analysis In An Integrated Microfluidic Device," <i>Analytical Chemistry</i> , Vol. 73, No. 3, pp. 565-570, 2/1/2001			
	C80	LAMMERINK, T. S. J. et al., "Modular Concept For Fluid Handling Systems," <i>IEEE</i> , pp. 389-394, 1996			
	C81	LI, PAUL C. H. et al., "Transport, Manipulation, And Reaction Of Biological Cells On-Chip Using Electrokinetic Effects," <i>Analytical Chemistry</i> , Vol. 69, No. 8, pp. 1564-1568, 4/15/1997			
	C82	LICKLIDER, LARRY et al., "A Micromachined Chip-Based Electrospray Source For Mass Spectrometry," <i>Analytical Chemistry</i> , Vol. 72, No. 2, pp. 367-375, 1/15/2000			
	C83	LIN, L. Y. et al., "Free-Space Micromachined Optical Switches For Optical Networking," <i>IEEE Journal of Selected Topics in Quantum Electronics</i> , Vol. 5, No. 1, pp. 4-9, 1/1999			
	C84	LÖTTERS, J C et al., "The Mechanical Properties Of The Rubber Elastic Polymer Polydimethylsiloxane For Sensor Applications," <i>J. Micromech. Microeng.</i> , Vol. 7, pp. 145-147, 1997			
	C85	LUCY, CHARLES A. et al., "Characterization Of The Cationic Surfactant Induced Reversal Of Electroosmotic Flow In Capillary Electrophoresis," <i>Anal. Chem.</i> , Vol. 68, pp. 300-305, 1996			
	C86	LUFT, JOSEPH R. et al., "A Method To Produce Microseed Stock For Use In The Crystallization Of Biological Macromolecules," <i>Acta Cryst.</i> , Vol. D55, pp. 988-993, 1999			
	C87	LUFT, JOSEPH R. et al., "Macromolecular Crystallization In A High Throughput Laboratory - The Search Phase," <i>Journal of Crystal Growth</i> , Vol. 232, pp. 591-595, 2001			
	C88	LUFT, JOSEPH R. et al., "Microbatch Macromolecular Crystallization In Micropipettes," <i>Journal of Crystal Growth</i> , Vol. 196, pp. 450-455, 1999			
	C89	MALUF, N., "An Introduction To Microelectromechanical Systems Engineering," Artech House Publishers, Boston London, pp. 42-45, 12/1999			
	C90	MANZ, A. et al., "Micromachining Of Monocrystalline Silicon And Glass For Chemical Analysis Systems," <i>Trends in Analytical Chemistry</i> , Vol. 10, No. 5, pp. 144-149, 1991			
	C91	MARSHALL, SID, "Fundamental Changes Ahead For Lab Instrumentation," <i>R&amp;D Magazine</i> , 5 pages, 2/1999			
	C92	MARSILI, RAY, "Lab-On-A-Chip Poised To Revolutionize Sample Prep," <i>R&amp;D Magazine</i> , 5 pages, 2/1999			
	C93	MCDONALD, J. COOPER et al., "Fabrication Of Microfluidic Systems In Poly(dimethylsiloxane)," <i>Electrophoresis</i> , Vol. 21, pp. 27-40, 2000			

Examiner Signature		Date Considered
--------------------	--	-----------------

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>1</sup> Applicant's unique citation designation number (optional). <sup>2</sup> Applicant is to place a check mark here if English language Translation is attached.

Substitute for form 1449B/PTO				<b>Complete if Known</b>	
<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>					
(use as many sheets as necessary)					
Sheet	10	of	13		
				Application Number	10/637,847
				Filing Date	August 7, 2003
				First Named Inventor	Carl L. Hansen
				Art Unit	1732
				Examiner Name	Edmund H. Lee
				Attorney Docket Number	20174C-004940US

<b>NON PATENT LITERATURE DOCUMENTS</b>				
Examiner Initials *	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.		
	C94	MORRIS, DANIEL W. et al., "Automation Of Protein Crystallization Trials: Use Of A Robot To Deliver Reagents To A Novel Multi-Chamber Vapor Diffusion Plate," <i>BioTechniques</i> , Vol. 7, No. 5, pp. 522-527, 1989		T <sup>2</sup>
	C95	MULLER, RICHARD S. et al., "Surface-Micromachined Microoptical Elements And Systems," <i>Proceedings of the IEEE</i> , Vol. 86, No. 8, pp. 1705-1720, 8/1998		
	C96	OLDFIELD, T. J. et al., "A Flexible Approach To Automated Protein Crystallization," <i>J. Appl. Cryst.</i> , Vol. 24, pp. 255-260, 1991		
	C97	OLE SCHUK, RICHARD D. et al., "Analytical Microdevices For Mass Spectrometry," <i>Trends In Analytical Chemistry</i> , Vol. 19, No. 6, pp. 379-388, 2000		
	C98	OLSSON, ANDERS et al., "Simulation Studies Of Diffuser And Nozzle Elements For Valve-Less Micropumps," <i>Transducers '97</i> , 1997 International Conference on Solid-State Sensors and Actuators, Chicago, Illinois, pp. 1039-1042, 6/16-19/1997		
	C99	PETHIG, RONALD et al., "Applications Of Dielectrophoresis In Biotechnology," <i>Tibtech</i> , Vol. 15, pp. 426-432, 10/1997		
	C100	QIN, DONG et al., "Elastomeric Light Valves," <i>Adv. Mater.</i> , Vol. 9, No. 5, pp. 407-410, 1997		
	C101	QIN, DONG et al., "Photolithography With Transparent Reflective Photomasks," <i>J. Vac. Sci. Technol. B</i> , Vol. 16, No. 1, pp. 98-103, 1/1998		
	C102	QUAKE, STEPHEN R. et al., "From Micro- To Nanofabrication With Soft Materials," <i>Science</i> , Vol. 290, pp. 1536-1540, 11/24/2000		
	C103	RAPP, R. et al., "LIGA Micropump For Gases And Liquids," <i>Sensors and Actuators A</i> , Vol. 40, pp. 57-61, 1/1994		
	C104	RESHETNYAK, I. I., "Characteristics Of The Influence Of Ultrasound On The Crystallization Kinetics In Small-Volume Solutions," <i>Sov. Phys. Acoust.</i> , Vol. 21, No. 1, pp. 61-63, 7/1975		
	C105	ROYLANCE, LYNN MICHELLE et al., "A Batch-Fabricated Silicon Accelerometer," <i>IEEE Transactions on Electron Devices</i> , Vol. ED-26, No. 12, pp. 1911-1917, 12/1979		
	C106	RUBIN, BYRON et al., "Minimal Intervention Robotic Protein Crystallization," <i>Journal of Crystal Growth</i> , Vol. 110, pp. 156-163, 1991		
	C107	RUMMEL, GABRIELE et al., "Lipidic Cubic Phases: New Matrices For The Three-Dimensional Crystallization Of Membrane Proteins," <i>Journal of Structural Biology</i> , Vol. 121, pp. 82-91, 1998		
	C108	SADAQUI, NOUREDINE et al., "TAOS: An Automatic System For Protein Crystallization," <i>Journal of Applied Crystallography</i> , Vol. 27, pp. 622-626, 1994		
	C109	SCHASFOORT, RICHARD B. M. et al., "Field-Effect Flow Control For Microfabricated Fluidic Networks," <i>Science</i> , Vol. 286, pp. 942-945, 10/29/1999		

Examiner Signature		Date Considered
--------------------	--	-----------------

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>1</sup> Applicant's unique citation designation number (optional). <sup>2</sup> Applicant is to place a check mark here if English language Translation is attached.

Substitute for form 1449B/PTO				<b>Complete if Known</b>	
<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>					
(use as many sheets as necessary)					
Sheet	11	of	13		
Application Number	10/637,847				
Filing Date	August 7, 2003				
First Named Inventor	Carl L. Hansen				
Art Unit	1732				
Examiner Name	Edmund H. Lee				
Attorney Docket Number	20174C-004940US				

<b>NON PATENT LITERATURE DOCUMENTS</b>				
Examiner Initials *	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.		T <sup>2</sup>
	C110	SCHUELLER, OLIVIER J. A. et al., "Fabrication Of Glassy Carbon Microstructures By Soft Lithography," Sensors and Actuators A, Vol. 72, pp. 126-139, 1999		
	C111	SHOJI, SHUICHI, "Fluids For Sensor Systems," Topics in Current Chemistry, Vol. 194, pp. 167-188, 1998		
	C112	SHOJI, SHUICHI et al., "Smallest Dead Volume Microvalves For Integrated Chemical Analyzing Systems," Transducers '91, 1991 International Conference on Solid-State Sensors and Actuators, San Francisco, California, pp. cover, 1052-1055, 1991		
	C113	SMITS, J.G., "Piezoelectric Micropump With Three Valves Working Peristaltically," Sensors and Actuators, Vol. A21-A23, pp. 203-206, 1990		
	C114	SNOOK, CHRISTOPHER F. et al., "Use Of A Crystallization Robot To Set Up Sitting-Drop Vapor-Diffusion Crystallization And <i>in situ</i> Crystallization Screens," Journal of Applied Crystallography, Vol. 33, pp. 344-349, 2000		
	C115	SOHN, L. L. et al., "Capacitance Cytometry: Measuring Biological Cells One By One," PNAS, Vol. 97, No. 20, pp. 10687-10690, 9/26/2000		
	C116	SORIANO, THIERRY M. B. et al., "ASTEC: An Automated System For Sitting-Drop Protein Crystallization," Journal of Applied Crystallography, Vol. 26, pp. 558-562, 1993		
	C117	STEVENS, RAYMOND C., "High-Throughput Protein Crystallization," Current Opinion in Structural Biology, Vol. 10, pp. 558-563, 2000		
	C118	THOMPSON, L. F. et al., "Introduction To Microlithography," 185th Meeting of the American Chemical Society, Seattle, WA, pp. 2 cover pages, 1-13, 3/20-25/1983		
	C119	TODD, PAUL et al., "Application Of Osmotic Dewatering To The Controlled Crystallization Of Biological Macromolecules And Organic Compounds," Journal of Crystal Growth, Vol. 110, pp 283-292, 1991		
	C120	TUFTE, O. N. et al., "Silicon Diffused-Element Piezoresistive Diaphragms," Journal of Applied Physics, Vol. 33, No. 11, pp. 3322-3327, 11/1962		
	C121	Ullmann's Encyclopedia of Industrial Chemistry, Sections 6 to 6.3, Topic: Carbon Black, Sixth Edition, 7 pages, 1999		
	C122	UNGER, MARC A. et al., "Monolithic Microfabricated Valves And Pumps By Multilayer Soft Lithography," Science, Vol. 288, pp. 113-116, 4/7/2000		
	C123	VAN DEN BERG, A. et al., "Micro Total Analysis Systems," Proceedings of the $\mu$ TAS '94 Workshop, University of Twente, The Netherlands, 17 pages, 11/21-22/1994		
	C124	VAN DE POL, F.C.M. et al., "A Thermo-Pneumatic Actuation Principle For A Microminiature Pump And Other Micromechanical Devices," Sensors and Actuators, Vol. 17, Nos. 1-2, pp. 139-143, 5/3/1989		

Examiner Signature	Date Considered
--------------------	-----------------

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>1</sup> Applicant's unique citation designation number (optional). <sup>2</sup> Applicant is to place a check mark here if English language Translation is attached.

Substitute for form 1449B/PTO				<b>Complete if Known</b>	
<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>					
(use as many sheets as necessary)					
Sheet	12	of	13		
				Application Number	10/637,847
				Filing Date	August 7, 2003
				First Named Inventor	Carl L. Hansen
				Art Unit	1732
				Examiner Name	Edmund H. Lee
				Attorney Docket Number	20174C-004940US

<b>NON PATENT LITERATURE DOCUMENTS</b>				
Examiner Initials *	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.		T <sup>2</sup>
	C125	VAN DE POL, F.C.M. et al., "Micro Liquid Handling Devices - A Review," Micro Systems Technologies, Vol. 90, pp. 799-805, 1990		
	C126	VERPOORTE, ELISABETH M. J. et al., "Three-Dimensional Micro Flow Manifolds For Miniaturized Chemical Analysis Systems," J. Micromech. Microeng., Vol. 7, pp. 246-256, 1994		
	C127	VIEIDER, CHRISTIAN et al., "A Pneumatically Actuated Micro Valve With A Silicon Rubber Membrane For Integration With Fluid Handling Systems," Transducers '95, 8th International Conference on Solid-State Sensors and Actuators and Eurosensors IX, Stockholm, Sweden, pp. 284-286, 6/25-29/1995		
	C128	VOGELSTEIN, BERT et al., "Digital PCR," Proc. Natl. Acad. Sci. USA, Vol. 96, pp. 9236-9241, 8/1999		
	C129	WASHIZU, MASAO et al., "Molecular Dielectrophoresis Of Biopolymers," IEEE Transactions on Industry Applications, Vol. 30, No. 4, pp. 835-843, 7/1994		
	C130	WHELEN, A. CHRISTIAN et al., "The Role Of Nucleic Acid Amplification And Detection In The Clinical Microbiology Laboratory," Annu. Rev. Microbiol., Vol. 50, pp. 349-373, 1996		
	C131	WHITESIDES, GEORGE M. et al., "Soft Lithography In Biology And Biochemistry," Annu. Rev. Biomed. Eng., Vol. 3, pp. 335-373, 2001		
	C132	WIENCEK, J. M., "New Strategies For Protein Crystal Growth," Annu. Rev. Biomed. Eng., Vol. 1, pp. 505-534, 1999		
	C133	WILBUR, JAMES L. et al., "Lithographic Molding: A Convenient Route To Structures With Sub-Micrometer Dimensions," Adv. Mater., Vol. 7, No. 7, pp. 649-652, 1995		
	C134	XIA, YOUNAN et al., "Complex Optical Surfaces Formed By Replica Molding Against Elastomeric Masters," Science, Vol. 273, pp. 347-349, 7/19/1996		
	C135	XIA, YOUNAN et al., "Micromolding Of Polymers In Capillaries: Applications In Microfabrication," Chem. Mater., Vol. 8, No. 7, pp. 1559-1566, 1996		
	C136	XIA, YOUNAN et al., "Reduction In The Size Of Features Of Patterned SAMs Generated By Microcontact Printing With Mechanical Compression Of The Stamp," Adv. Mater., Vol. 7, No. 5, pp. 471-473, 1995		
	C137	XIA, YOUNAN et al., "Soft Lithography," Angew. Chem. Int. Ed., Vol. 37, pp. 551-575, 1998		
	C138	XU, BING et al., "Making Negative Poisson's Ratio Microstructures By Soft Lithography," Adv. Mater., Vol. 11, No. 14, pp. 1186-1189, 1999		
	C139	YANG, XING et al., "A Low Power MEMS Silicone/Parylene Valve," Solid-State Sensor and Actuator Workshop, Hilton Head Island, South Carolina, 4 pages, 6/7-11/1998		
	C140	YANG, XING et al., "A MEMS Thermopneumatic Silicone Membrane Valve," IEEE 10th Annual International Workshop of Micro Electro Mechanical Systems, Nagoya, Japan, pp. cover, 114-118, 1/26-30/1997		

Examiner Signature	Date Considered
--------------------	-----------------

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>1</sup> Applicant's unique citation designation number (optional). <sup>2</sup> Applicant is to place a check mark here if English language Translation is attached.

Substitute for form 1449B/PTO				<b>Complete if Known</b>	
<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>					
(use as many sheets as necessary)					
Sheet	13	of	13		
Application Number	10/637,847				
Filing Date	August 7, 2003				
First Named Inventor	Carl L. Hansen				
Art Unit	1732				
Examiner Name	Edmund H. Lee				
Attorney Docket Number	20174C-004940US				

<b>NON PATENT LITERATURE DOCUMENTS</b>				
Examiner Initials *	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.		
	C141	YAZDI, NAVID et al., "Micromachined Inertial Sensors," Proceedings of IEEE, Vol. 86, No. 8, pp. 1640-1659, 8/1998		
	C142	YOUNG, A. M. et al., "Contoured Elastic-Membrane Microvalves For Microfluidic Network Integration," Journal of Biomechanical Engineering, Vol. 121, pp. 2-6, 2/1999		
	C143	ZAMPIIGHI, G. et al., "Structural Organization Of (Na <sup>+</sup> + K <sup>+</sup> )-ATPase In Purified Membranes," Journal of Cell Biology, Vol. 98, pp. 1851-1864, 5/1984		
	C144	ZENGERLE, R. et al., "A Micro Membrane Pump With Electrostatic Actuation," Micro Electro Mechanical Systems '92, Travemünde, Germany, pp. 19-24, 2/4-7/1992		
	C145	ZENGERLE, R. et al., "Performance Simulation Of Microminiaturized Membrane Pumps," 7th International Conference on Solid-State Sensors and Actuators, Yokohama, Japan, pp. 2 cover pages, 106-109, 6/7-10/1993		

60605997 v1

Examiner Signature	Date Considered
--------------------	-----------------

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>1</sup> Applicant's unique citation designation number (optional). <sup>2</sup> Applicant is to place a check mark here if English language Translation is attached.